

REMARKS/ARGUMENTS

Applicant respectfully requests reconsideration of this application in view of the following remarks.

Drawing Objection – 37 CFR 1.83(a)

Applicant submits herewith a new Figure 13. Figure 13 shows features as in claims 25, 26, 27, and 28. Support for Figure 13 may be found in the originally submitted application. No new matter has been added. Applicant submits that Figure 13 complies with 37 CFR 1.83(a) and therefore requests removal of this objection.

Specification Objection – ABSTRACT OF THE DISCLOSURE

Applicant has amended the Abstract of the Disclosure and submits that as amended the Abstract of the Disclosure is in compliance with 37 CFR 1.72 and therefore respectfully requests removal of this objection.

Specification – Arrangement of the Specification

Applicant appreciates the Examiner's suggestion. As the Office is aware (37 CFR 1.73, MPEP 608.01(d)) the Brief Summary of the Invention is an aspirational rather than a mandatory requirement. Applicant is aware of estoppel issues with the Summary of the Invention, and so respectfully declines to provide such. In the event that the Office has determined that the requirement is mandatory, Applicant preserves the right to comply. Applicant submits that the application is in compliance with 37 CFR 1.73 and 37 CFR 1.77(b) and therefore respectfully requests removal of this objection.

Objection - Claim 3 informality

Applicant has cancelled without prejudice claim 3.

Claim 1 Rejection under 35 U.S.C. § 112 ¶ 2

Applicant has amended claim 1 to more particularly point out and distinctly claim the subject matter which Applicant regards as the invention. As amended, Applicant submits that claim 1 is in compliance with 35 U.S.C. § 112 ¶ 2 and therefore respectfully requests removal of this rejection and allowance of claim 1.

Claims 1, 2, 3, 4, 6, 30, 36, 37, 38, and 39 Rejection under 35 U.S.C. § 102(e) - Bentley

The Office at 8 states:

8. Claims 1, 2, 3, 4, 6, 30, 36, 37, 38, and 39 are rejected under 35 U.S.C. 102(e) as being anticipated by Bentley United States Patent Number US 7,142,173 B2 (hereinafter referred to as "Bentley `173").

Claim 1 Rejection under 35 U.S.C. § 102(e) - Bentley

The Office at 9 states:

9. With regard to claim 1, Bentley `173 disclose a method comprising: (a) positioning an array of light emitting devices (LEDs) (see FIG. 1, element 14, further described in column 6, line 15, lighted array 14) in a first position (see column 11, lines 53-55 right most extreme of a swing cycle); (b) moving said array of LEDs (see column 9, lines 7-20); (c) determining if said array of LEDs are in a given position (see column 12, lines 13-26); (d) receiving an input display signal (see FIG. 6, element 74, further described in

column 11, lines 45-50); (e) energizing one or more LEDs in said array of LEDs (see column 11, lines 15-20, and additionally FIG. 6, element 74); (f) sensing if said array of LEDs is at an end position (see column 11, lines 55-60); and (g) if not at said end position repeating (b) through (f) (see FIG. 6, illustrating column illumination between a left and right extreme position, further described in column 11, lines 46-end, and continued in column 12, lines 1-5); and if at said end position repeating (a) through (f) (see column 10, lines 30-50 describing various modes of display repeated).
(Emphases in original.)

In order to establish a *prima facie* anticipation rejection under 35 U.S.C. § 102, the United States Patent & Trademark Office (USPTO) must provide "in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim." *Lindemann Maschinenfabrik v. American Hoist & Derrick* ("Lindemann"), 730 F.2d 1452, 1458 (Fed. Cir. 1984) (Emphases added). Additionally, "anticipation under § 102 can be found only when the reference discloses exactly what is claimed." *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 780 (Fed. Cir. 1985). (Emphasis added.)

Applicant's claim 1 as amended recites:

1. A method comprising:
 - (a) positioning an array of light emitting devices (LEDs) in a first position;
 - (b) moving said array of LEDs;
 - (c) determining if said array of LEDs are in a given position;
 - (d) receiving an input display signal;
 - (e) energizing one or more LEDs in said array of LEDs based on said received input

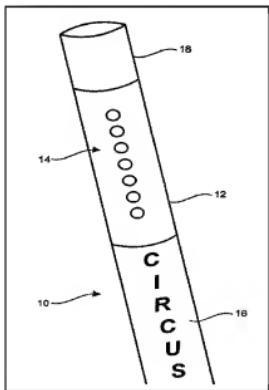
display signal;

- (f) sensing if said array of LEDs is at an end position; and
- (g) if not at said end position repeating (b) through (f); and
- if at said end position repeating (a) through (f).

With respect to the first element, the Office states:

(a) positioning an array of light emitting devices (LEDs) (see FIG. 1, element 14, further described in column 6, line 15, lighted array 14) in a first position (see column 11, lines 53-55 right most extreme of a swing cycle);

The cited references state in part:



(a) (see FIG. 1, element 14, further described in column 6, line 15, lighted array 14)

As shown in FIG. 1, the preferred embodiment 10 consists of a clear tube 12 and a lighted array 14. The lower portion of the tube forms a handle 16 and allows the assembly to be waved back and forth. The two ends of the clear tube 12 are plugged with an end cap 18. The handle 16 forms a battery holder for powering the device and can be accessed by removing the lower end cap 18.

The handle 16 also may be labeled with advertising, instructions, and other attention getting graphics.

in a first position (see column 11, lines 53-55 right most extreme of a swing cycle);

The device then checks to see if the sensor has **detected** the right most extreme of the swing cycle, Detected Right Inertia Reversal? 78.

(Emphasis added.)

Applicant submits that the cited reference has failed to disclose and therefore cannot anticipate (a) **positioning** an array of light emitting devices (LEDs) in a first position as Applicant has claimed. (Emphasis added.)

Detecting a right most extreme of a swing cycle (Bentley) is not the same as positioning an array of light emitting devices (LEDs) in a first position as Applicant has claimed.

Applicant submits that because Bentley does not disclose this limitation claimed by Applicant, Bentley cannot anticipate what Applicant has claimed. Applicant respectfully requests allowance of claim 1 and claims 2-4, and 6 which are dependent on claim 1.

With respect to the fourth element, the Office states:

(d) receiving an input display signal (see FIG. 6, element 74, further described in column 11, lines 45-50);

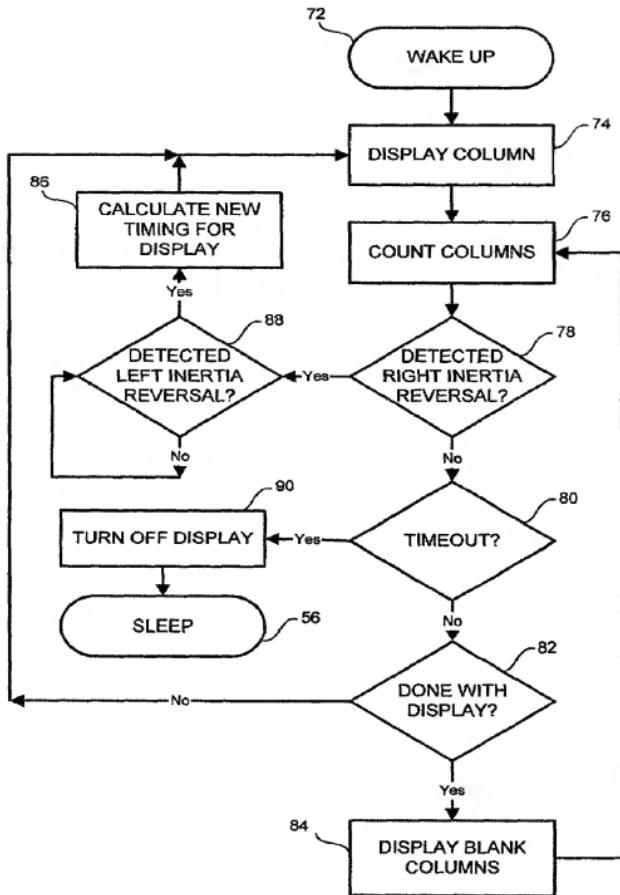


FIG. 6

FIG. 6 is a flow chart of the display method. It begins with the device **Wake Up** 72, which occurs when the stick is shaken rapidly. The device then will **Display Column** 74 of data. This will illuminate the lighted array with the columnar data.

(Emphasis added.)

Applicant submits that the cited reference has failed to disclose and therefore cannot anticipate (d) **receiving** an input display signal as Applicant has claimed. (Emphasis added.)

A Wake Up (Bentley) is not the same as receiving an input display signal as Applicant has claimed.

Applicant submits that because Bentley does not disclose this limitation claimed by Applicant, Bentley cannot anticipate what Applicant has claimed. Applicant respectfully requests allowance of claim 1 and claims 2-4, and 6 which are dependent on claim 1.

With respect to the fifth element, the Office states:

(e) energizing one or more LEDs in said array of LEDs (see column 11, lines 15-20, and additionally FIG. 6, element 74);

The visual display is produced by displaying a column of data at a time. A dot matrix is employed for drawing alphanumeric and graphic characters. Each column of the dot matrix is displayed one at a time on the lighted array 14 shown in FIG. 2 in a columnar piecewise fashion. The lighted array is moved through space by the user, the effect of which, is to spread the visual display in a linear direction.

Applicant submits that the cited reference has failed to disclose and therefore cannot anticipate (e) energizing one or more LEDs in said array of LEDs **based on said received input display signal** as Applicant has claimed. (Emphasis added.)

Applicant submits that because Bentley does not disclose this limitation claimed by Applicant, Bentley cannot anticipate what Applicant has claimed. Applicant respectfully requests allowance of claim 1 and claims 2-4, and 6 which are dependent on claim 1.

Claim 2 Rejection under 35 U.S.C. § 102(e) - Bentley

The Office at 10 states:

10. With regard to claim 2, Bentley '173 discloses the method of claim 1 wherein **said positioning and moving further comprises a linear motion** (see column 11, lines 19-22).

(Emphasis in original.)

Applicant submits that claim 2 is dependent on independent claim 1 and as such inherits the limitations of the independent claim. As detailed above in the **Claim 1 Rejection under 35 U.S.C. § 102(e) - Bentley** discussion, Bentley fails to disclose limitations in independent claim 1 and therefore Bentley cannot anticipate Applicant's claim 2. Further, Bentley cannot anticipate the further limitation of Applicant's claim 2 wherein **said positioning and moving further comprises a linear motion**. Applicant respectfully requests allowance of claim 2.

Claim 3 Rejection under 35 U.S.C. § 102(e) - Bentley

Applicant has cancelled claim 3 without prejudice.

Claim 4 Rejection under 35 U.S.C. § 102(e) - Bentley

The Office at 12 states:

12. With regard to claim 4, Bentley '173 discloses the method of claim 1 wherein said array (furthermore see FIG. 11C) further comprises an array of substantially red light emitting diodes (see column 18, lines 2-7), an array of substantially green light emitting diodes (see column 18, lines 2-7), and an array of substantially blue light emitting diodes (see column 18, lines 2-7).

(Emphases in original.)

Applicant submits that claim 4 is dependent on independent claim 1 and as such inherits the limitations of the independent claim. As detailed above in the Claim 1 Rejection under 35 U.S.C. § 102(e) - Bentley discussion, Bentley fails to disclose limitations in independent claim 1 and therefore Bentley cannot anticipate Applicant's claim 4. Further, Bentley cannot anticipate the further limitation of Applicant's claim 4 wherein said array further comprises an array of substantially red light emitting diodes, an array of substantially green light emitting diodes, and an array of substantially blue light emitting diodes. Applicant respectfully requests allowance of claim 4.

Claim 6 Rejection under 35 U.S.C. § 102(e) - Bentley

The Office at 13 states:

13. With regard to claim 6, Bentley '173 discloses the method of claim 1 further comprising M said light emitting devices (see FIG. 1 element 14) and N said given positions (see column 12, lines 6-26) and said method of claim 1 is capable of producing an MxN display (see column 12 lines 6-26).

(Emphases in original.)

Applicant submits that claim 6 is dependent on independent claim 1 and as such inherits the limitations of the independent claim. As detailed above in the Claim 1

Rejection under 35 U.S.C. § 102(e) - Bentley discussion, Bentley fails to disclose limitations in independent claim 1 and therefore Bentley cannot anticipate Applicant's claim 6. Further, Bentley cannot anticipate the further limitation of Applicant's claim 6 further comprising M said light emitting devices and N said given positions and said method of claim 1 is capable of producing an $M \times N$ display. Applicant respectfully requests allowance of claim 6.

Claim 30 Rejection under 35 U.S.C. § 102(e) - Bentley

The Office at 14 states:

14. With regard to claim 30, it is similarly analyzed as claim 1 above and therefore rejected under the same rationale.

Applicant submits that claim 30 is similarly detailed as above in the **Claim 1 Rejection under 35 U.S.C. § 102(e) - Bentley** discussion, Bentley fails to disclose limitations in independent claim 30 and therefore Bentley cannot anticipate Applicant's claim 30. Applicant respectfully requests allowance of claim 30.

Claim 36 Rejection under 35 U.S.C. § 102(e) - Bentley

The Office at 15 states:

15. With regard to claim 36, Bentley '173 teaches a method for producing an $M \times N$ display (see column 12, lines 6-26 and further displayed at FIGS. 12C and 12D), the method comprising: moving a row of substantially linearly spaced M elements capable of light production to N positions (see column 12, lines 6-26); and energizing one or more of said M elements to produce said light production at one or more of said N positions (see column 12, lines 6-26).

(Emphases in original.)

Applicant's amended claim 36 recites:

36. A method for producing an $M \times N$ display, the method comprising:

receiving a video input display signal;

moving a row of substantially linearly spaced M elements capable of light production to N positions; and

energizing one or more of said M elements to produce said light production at one or more of said N positions based upon said received video input display signal.

Applicant submits that the cited reference has failed to disclose and therefore cannot anticipate **receiving a video input display signal** as Applicant has claimed. (Emphasis added.)

Applicant submits that because Bentley does not disclose this limitation claimed by Applicant, Bentley cannot anticipate what Applicant has claimed. Applicant respectfully requests allowance of claim 36.

Claim 37 Rejection under 35 U.S.C. § 102(e) - Bentley

The Office at 16 states:

16. With regard to claim 37, Bentley '173 clearly teaches a **method for producing an $M \times N$ display** (see column 12, lines 6-26 and further displayed at FIGs. 12C and 12D), the **method comprising: moving M elements capable of light production to N positions** (see column 12,

lines 6-26); and energizing one or more of said M elements to produce said light production at one or more of said N positions (see column 12, lines 6-26).

(Emphases in original.)

Applicant's amended claim 37 recites:

37. A method for producing an MxN display, the method comprising:

receiving a video signal;

moving M elements capable of light production to N positions; and

energizing one or more of said M elements to produce said light production at one or more of said N positions based upon said received video signal.

Applicant submits that the cited reference has failed to disclose and therefore cannot anticipate **receiving a video signal** as Applicant has claimed. (Emphasis added.)

Applicant submits that because Bentley does not disclose this limitation claimed by Applicant, Bentley cannot anticipate what Applicant has claimed. Applicant respectfully requests allowance of claim 37, and claims 38-39 which are dependent on claim 37.

Claim 38 Rejection under 35 U.S.C. § 102(e) - Bentley

The Office at 17 states:

17. With regard to claim 38, Bentley '173 clearly teaches the method of claim 37 wherein said moving further comprises moving at substantially a non-constant velocity (the display accelerates and decelerates to create the image because the user must stop its motion to change direction at both ends of display area; furthermore, see column 3, lines 12-35).

(Emphasis in original.)

Applicant submits that claim 38 is dependent on independent claim 37 and as such inherits the limitations of the independent claim. As detailed above in the Claim 37 Rejection under 35 U.S.C. § 102(e) - Bentley discussion, Bentley fails to disclose limitations in independent claim 37 and therefore Bentley cannot anticipate Applicant's claim 38. Further, Bentley cannot anticipate the further limitation of Applicant's claim 38 wherein said moving further comprises moving at substantially a non-constant velocity. Applicant respectfully requests allowance of claim 38.

Claim 39 Rejection under 35 U.S.C. § 102(e) - Bentley

The Office at 18 states:

18. With regard to claim 39, Bentley '173 teaches the method of claim 37 wherein said energizing further comprises energizing at substantially a non-constant time interval (see column 3, lines 12-35).

(Emphasis in original.)

Applicant submits that claim 39 is dependent on independent claim 37 and as such inherits the limitations of the independent claim. As detailed above in the Claim 37 Rejection under 35 U.S.C. § 102(e) - Bentley discussion, Bentley fails to disclose limitations in independent claim 37 and therefore Bentley cannot anticipate Applicant's claim 39. Further, Bentley cannot anticipate the further limitation of Applicant's claim 39

wherein said energizing further comprises energizing at substantially a non-constant time interval. Applicant respectfully requests allowance of claim 39.

Claims 10, 11, 12, 13, 14 and 15 Rejections under 35 U.S.C. § 102(b) - Brotz

The Office at 20 states:

20. Claims 10, 11, 12, 13, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Brotz United States Patent Number 5,663,740 (hereinafter referred to as "Brotz '740").

Claim 10 Rejection under 35 U.S.C. § 102(b) - Brotz

The Office at 21 states:

21. With regard to claim 10, Brotz '740 discloses **an apparatus comprising: a linear movement stage** (see FIG. 1, elements 20 22 and 24, further described in column 4, lines 29-35); **a substrate mounted to said linear movement stage** (see FIG. 6 element 64, screen, further described in column 4, lines 54-60); **an array of light emitting devices (LEDs) attached to said substrate** (see column 2, lines 36-67); and **a controller attached to said substrate** (see column 4, lines 63-67, computer 70, depicted in FIG. 6 and is attached to display screen 64 by line 68).

(Emphases in original.)

Applicant's amended claim 10 recites:

10. An apparatus comprising:

a linear movement stage for producing linear movement;
a substrate mounted to said linear movement stage;

an array of light emitting devices (LEDs) attached to said substrate and **capable of light emission substantially perpendicular to said linear movement**; and
a controller attached to said substrate.

(Emphasis added.)

Applicant submits that the cited reference has failed to disclose and therefore cannot anticipate an array of light emitting devices (LEDs) attached to said substrate and **capable of light emission substantially perpendicular to said linear movement** as Applicant has claimed. (Emphasis added.)

Applicant submits that because Brotz does not disclose this limitation claimed by Applicant, Brotz cannot anticipate what Applicant has claimed. Applicant respectfully requests allowance of claim 10 and claims 11-15 which are dependent on claim 10.

Claim 11 Rejection under 35 U.S.C. § 102(b) - Brotz

The Office at 22 states:

22. With regard to claim 11, Brotz '740 discloses **the apparatus of claim 10 wherein said linear movement stage is capable of movement in one or more directions** (see column 4, lines 29-31).

(Emphasis in original.)

Applicant submits that claim 11 is dependent on independent claim 10 and as such inherits the limitations of the independent claim. As detailed above in the **Claim 10 Rejection under 35 U.S.C. § 102(b) - Brotz** discussion, Brotz fails to disclose limitations in independent claim 10 and therefore Brotz cannot anticipate Applicant's claim 11. Further, **Brotz cannot anticipate the further limitation of Applicant's claim 11 wherein said linear**

movement stage is capable of movement in one or more directions. Applicant respectfully requests allowance of claim 11.

Claim 12 Rejection under 35 U.S.C. § 102(b) - Brotz

The Office at 23 states:

23. With regard to claim 12, Brotz '740 discloses **the apparatus of claim 10 wherein said linear movement stage is capable of movement back and forth** (see column 4, lines 29-31).

(Emphasis in original.)

Applicant submits that claim 12 is dependent on independent claim 10 and as such inherits the limitations of the independent claim. As detailed above in the **Claim 10 Rejection under 35 U.S.C. § 102(b) - Brotz** discussion, Brotz fails to disclose limitations in independent claim 10 and therefore Brotz cannot anticipate Applicant's claim 12. Further, Brotz cannot anticipate the further limitation of Applicant's claim 12 wherein said linear movement stage is capable of movement back and forth. Applicant respectfully requests allowance of claim 12.

Claim 13 Rejection under 35 U.S.C. § 102(b) - Brotz

The Office at 24 states:

24. With regard to claim 13 Brotz '740 discloses **the apparatus of claim 10 wherein said controller is coupled to control illumination of zero or more LEDs of said array of LEDs** (see column 3, lines 35-end and continued at column 4, lines 1-20).

(Emphasis in original.)

Applicant submits that claim 13 is dependent on independent claim 10 and as such inherits the limitations of the independent claim. As detailed above in the Claim 10 Rejection under 35 U.S.C. § 102(b) - Brotz discussion, Brotz fails to disclose limitations in independent claim 10 and therefore Brotz cannot anticipate Applicant's claim 13. Further, Brotz cannot anticipate the further limitation of Applicant's claim 13 wherein said controller is coupled to control illumination of zero or more LEDs of said array of LEDs. Applicant respectfully requests allowance of claim 13 and claim 14 which is dependent on claim 13.

Claim 14 Rejection under 35 U.S.C. § 102(b) - Brotz

The Office at 25 states:

25. With regard to claim 14 Brotz '740 discloses **the apparatus of claim 13 wherein said controller is coupled to control positioning of said linear movement stage** (see column 4, lines 63-67).

(Emphasis in original.)

Applicant submits that claim 14 is dependent on claim 13 which is dependent on independent claim 10 and as such inherits the limitations of the intervening claims. As detailed above in the Claim 10 Rejection under 35 U.S.C. § 102(b) - Brotz discussion and the Claim 13 Rejection under 35 U.S.C. § 102(b) - Brotz discussion, Brotz fails to disclose limitations in independent claim 10 and dependent claim 13 and therefore Brotz cannot anticipate Applicant's claim 14. Further, Brotz cannot anticipate the further limitation of Applicant's claim 14 wherein said controller is coupled to control positioning of said linear movement stage. Applicant respectfully requests allowance of claim 14.

Claim 15 Rejection under 35 U.S.C. § 102(b) - Brotz

The Office at 26 states:

26. With regard to claim 15, Brotz '740 discloses **the apparatus of claim 10 wherein said linear movement stage further comprises one or**

more substantially parallel rails (see FIG. 1 rails extend from support mechanism as shown to keep movement of shaft 18 linear). (Emphasis in original.)

Applicant submits that claim 15 is dependent on independent claim 10 and as such inherits the limitations of the independent claim. As detailed above in the Claim 10 Rejection under 35 U.S.C. § 102(b) - Brotz discussion, Brotz fails to disclose limitations in independent claim 10 and therefore Brotz cannot anticipate Applicant's claim 15. Further, Brotz cannot anticipate the further limitation of Applicant's claim 15 wherein said linear movement stage further comprises one or more substantially parallel rails. Applicant respectfully requests allowance of claim 15.

Claims 5, 7 and 8 Rejection under 35 U.S.C. § 103(a) – Bentley in view of Nobile

The Office at 28 states:

28. Claims 5, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bentley '173 as applied to claims 4 and 1 above respectively, and further in view of Nobile et al., United States Patent Number 5,057,827 (hereinafter referred to as "Nobile '827").

Claim 5 Rejection under 35 U.S.C. § 103(a) – Bentley in view of Nobile

The Office at 29-31 states:

29. With regard to claim 5, Bentley '173 clearly teaches **the method of claim 4 and light emitted from said red, green, and blue light emitting diodes**. However, Bentley fails to teach **focusing any light emitted on a projection surface**.

30. In the same field of endeavor, Nobile '827 teaches **focusing any light emitted on a projection surface** (see column 7, lines 60-end and continued at column 8, lines 1-15, film 92; furthermore see column 8, lines 30-55, surface 214).

31. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have been motivated to incorporate light projecting method as taught by Nobile '827 into the display method of Bentley '173 because the both are within the same field of endeavor and furthermore, the method as taught by Nobile '827 would result in an improved image (see Nobile '827 column 4, lines 37-46).

(Emphases in original.)

Applicant's claim 5 recites:

5. The method of claim 4 further comprising focusing any light emitted from said red, green, and blue light emitting diodes on a projection surface.

Applicant submits that claim 5 is dependent on claim 4 which is dependent on independent claim 1 and as such inherits the limitations of the intervening claims. As detailed above in the Claim 1 Rejection under 35 U.S.C. § 102(e) - Bentley discussion, and the Claim 4 Rejection under 35 U.S.C. § 102(e) – Bentley discussion Bentley fails to disclose limitations in independent claim 1 and dependent claim 4, nor does Bentley in view of Nobile cure these defects.

For all the reasons stated above, Bentley in view of Nobile fails to disclose or make obvious what Applicant has claimed. Applicant respectfully requests removal of the rejection for claim 5, and allowance of claim 5.

Claim 7 Rejection under 35 U.S.C. § 103(a) – Bentley in view of Nobile

The Office at 32 states:

32. With regard to claim 7 Nobile '827 in view of Bentley '173 teaches **a machine-readable medium having stored thereon instructions** (see Nobile column 4, lines 31-36) **which when executed performs a majority of the method of claim 1** (see Bentley '173 column 8, lines 15-23, additionally in column 9, lines 7-20 and column 10 generally. (Emphases in original.)

Applicant's claim 7 recites:

7. A machine-readable medium having stored thereon instructions, which when executed performs the method of claim 1.

Firstly, Applicant submits that claim 7 is dependent on independent claim 1 and as such inherits the limitations of claim 1. As detailed above in the **Claim 1 Rejection under 35 U.S.C. § 102(e) - Bentley** discussion Bentley fails to disclose limitations in independent claim 1, nor does Bentley in view of Nobile cure these defects.

Secondly, Nobile fails to disclose or suggest what Applicant has claimed "A machine-readable medium having stored thereon instructions, which when executed performs the method of claim 1." Indeed at the cited reference Nobile states "It is contemplated that rotational speeds of 150 to 1000 rpm are maintained by the motor 16. At 160 rpm, a displayed image can be maintained fixed relative to an observer, but it will flicker due to the slow refresh rate. Above about 900 rpm, the refresh rate is fast enough to produce a flicker-free display." which has NOTHING to do with a machine-readable medium. Thus Nobile does not cure this defect and the combination of Bentley in view of Nobile fails to disclose or make

obvious what Applicant has claimed. Applicant respectfully requests removal of the rejection for claim 7, and allowance of claim 7.

Thirdly, Applicant takes exception the Office's statement of "which when executed performs a **majority** of the method of claim 1." Applicant's claim does not use the word majority nor is it an acceptable standard for rejection. Just because something does a majority does not make the combination obvious. Applicant request the Examiner provide a legal basis for this type of rejection. Bentley in view of Nobile fails to disclose or make obvious what Applicant has claimed. Applicant respectfully requests removal of the rejection for claim 7, and allowance of claim 7.

Claim 8 Rejection under 35 U.S.C. § 103(a) – Bentley in view of Nobile

The Office at 33 states:

33. With regard to claim 8, it is similarly analyzed as claim 7 above and rejected on the same rationale (the **processor and memory** are taught by Nobile '827 at column 5, lines 6-16 and illustrated in FIG. 3).

(Emphasis in original.)

Applicant submits that claim 8 is similarly detailed as above in the **Claim 7 Rejection under 35 U.S.C. § 103(a) – Bentley in view of Nobile** discussion, and that for the same three reasons the combination of Bentley in view of Nobile fails to disclose or make obvious what Applicant has claimed. Applicant respectfully requests removal of the rejection for claim 8, and allowance of claim 8.

Claim 9 Rejection under 35 U.S.C. § 103(a) – Bentley in view of Examiner's Personal Knowledge

The Office at 34-36 states:

34. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bentley '173.

35. With regard to claim 9, Bentley '173 teaches **method of claim 1**. However, Bentley '173 does not teach **communicating a payment and/or credit**.

36. It would have been obvious matter of design choice to modify the method to communicate a payment and/or credit since applicant has not disclosed that having such information displayed serves or solves any particular purpose other than its general intent of communicating information visually, as is true with all displays.

(Emphases in original.)

Firstly, Applicant submits that claim 9 is dependent on independent claim 1 and as such inherits the limitations of claim 1. As detailed above in the **Claim 1 Rejection under 35 U.S.C. § 102(e) - Bentley** discussion Bentley fails to disclose limitations in independent claim 1, nor does Bentley in view of the Examiner's Personal Knowledge cure these defects.

Secondly, **Applicant takes exception to the Examiner's statement** of "It would have been obvious matter of design choice to modify the method to communicate a payment and/or credit since applicant has not disclosed

that having such information displayed serves or solves any particular purpose other than its general intent of communicating information visually, as is true with all displays."

First, Applicant is unaware that claims must serve or solve a purpose. Applicant requests the Examiner provide a legal basis for this statement.

Second, Applicant is unaware that the Examiner may assign intent to a claim. Applicant requests the Examiner provide a legal basis to assign intent.

Third, Applicant is not aware of the truth of this statement "...intent of communicating information visually, as is true with **all** displays." (Emphasis added). Applicant therefore requests the Examiner comply with the provisions of 37 CFR § 1.104(d)(2) and supply Applicant with an affidavit.

With respect to the Examiner's personal knowledge statement of "...intent of communicating information visually, as is true with **all displays."**
(Emphasis added), **Applicant hereby requests, as allowed under the Rules, an Affidavit by this Examiner of such personal knowledge. The Examiner is compelled to comply fully with the provisions of 37 CFR § 1.104(d)(2). Please note that failure by the Examiner to respond in a legally sufficient manner within the next Office Action will be deemed an admission against the Office.**

Fourth, Applicant takes exception to the self-serving statement of the Examiner "...obvious matter of design choice." Applicant therefore requests the Examiner comply with the provisions of 37 CFR § 1.104(d)(2) and supply Applicant with an affidavit.

With respect to the Examiner's personal knowledge statement of "...obvious matter of design choice." (Emphasis added), *Applicant hereby requests, as allowed under the Rules, an Affidavit by this Examiner of such personal knowledge. The Examiner is to comply fully with the provisions of 37 CFR § 1.104(d)(2). Please note that failure by the Examiner to respond in a legally sufficient manner within the next Office Action will be deemed an admission against the Office.*

Bentley in view of Examiner's Personal Knowledge fails to disclose or make obvious what Applicant has claimed. Applicant respectfully requests removal of the rejection for claim 9, and allowance of claim 9.

Claims 16, 18, 19, and 24 Rejection under 35 U.S.C. § 103(a) – Brotz in view of Nobile

The Office at 37 states:

37. Claims 16, 18,19 and 24 are rejected under 35 U.S.C. 103(a) as being, unpatentable over Brotz '740 and further in view of Nobile '827.

Claim 16 Rejection under 35 U.S.C. § 103(a) – Brotz in view of Nobile

The Office at 38-40 states:

38. With regard to claim 16, Brotz '740 teaches **An apparatus for creating a display comprising: means for positioning an array of light emitting devices (LEDs)** (see column 3, lines 35-67 continued at column 4 lines 1-20 and additionally described in column 4, lines 54-end and continued in column 5, lines 1-15); **means for energizing zero or more LEDs of said array of LEDs** (see column 3, lines 35-67 continued at column 4 lines 1-20). However, Brotz '740 differs from the claimed invention in that Brotz '740 does not disclose a **means for focusing any light from said energized zero or more LEDs**.

39. In the same field of endeavor, Nobile '827 teaches **means for focusing any light from said energized zero or more LEDs** (see column 7, lines 60-end and continued at column 8, lines 1-15, film 92; furthermore see column 8, lines 30-55, surface 214).

40. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have been motivated to incorporate the light focusing device as taught by Nobile '827 into the display device of Brotz '740 because such focused light improves light intensity and clarity.

(Emphases in original.)

Applicant's amended claim 16 recites:

16. An apparatus for creating a display comprising:

means for positioning an array of light emitting devices (LEDs) at a position in an XY plane;

means for energizing zero or more LEDs of said array of LEDs; and

means for focusing in a Z plane any light from said energized zero or more LEDs.

Applicant submits that the cited references fail to disclose or suggest the limitations of positioning in an XY plane and focusing in a Z plane. Nor does Brotz in view of Nobile disclose or suggest these limitations. Brotz in view of Nobile fails to disclose or make obvious what Applicant has claimed. Applicant respectfully requests removal of the rejection for claim 16, and allowance of claim 16 and claims 18, 19, and 24 which are dependent on claim 16 and which Brotz in view of Nobile fails to disclose or make obvious what Applicant has claimed.

Claim 18 Rejection under 35 U.S.C. § 103(a) – Brotz in view of Nobile

The Office at 41 states:

41. With regard to claim 18, Brotz '740 in view of Nobile '827 clearly **teaches the apparatus of claim 16 further comprising means for compensating for wear associated with said means for positioning** (see Nobile '827, column 5, 38-46 rotary member 12 uses slip rings 24 to compensate for wear).

(Emphasis in original.)

Applicant submits that claim 18 is dependent on independent claim 16 and as such inherits the limitations of the independent claim. As detailed above in the **Claim 16 Rejection under 35 U.S.C. § 103(a) – Brotz in view of Nobile** discussion, Brotz in view of Nobile fails to disclose or make obvious what Applicant has claimed in claim 16, nor does Brotz in view of Nobile disclose or make obvious what Applicant has additionally claimed in claim 18 "further comprising means for compensating for wear associated with said means for positioning." Applicant respectfully requests allowance of claim 18.

Claim 19 Rejection under 35 U.S.C. § 103(a) – Brotz in view of Nobile

The Office at 42 states:

42. With regard to claim 19, Brotz '740 in view of Nobile '827 discloses **the apparatus of claim 16 wherein said means for positioning comprises means for positioning in a substantially circular path** (see Nobile '827, column 4, lines 20-30; 360 degree sweep).
(Emphasis in original.)

Applicant submits that claim 19 is dependent on independent claim 16 and as such inherits the limitations of the independent claim. As detailed above in the **Claim 16 Rejection under 35 U.S.C. § 103(a) – Brotz in view of Nobile** discussion, Brotz in view of Nobile fails to disclose or make obvious what Applicant has claimed in claim 19, nor does Brotz in view of Nobile disclose or make obvious what Applicant has additionally claimed in claim 19 "wherein said means for positioning comprises means for positioning in a substantially circular path." Applicant respectfully requests allowance of claim 19.

Claim 24 Rejection under 35 U.S.C. § 103(a) – Brotz in view of Nobile

The Office at 43 states:

43. With regard to claim 24, Brotz '740 in view of Nobile '827 discloses **a machine-readable medium having stored thereon information representing the apparatus of claim 16** (see Nobile '827, column 5, lines 6-17).
(Emphasis in original.)

Applicant submits that claim 24 is dependent on independent claim 16 and as such inherits the limitations of the independent claim. As detailed above in the Claim 16

Rejection under 35 U.S.C. § 103(a) – Brotz in view of Nobile discussion,

Brotz in view of Nobile fails to disclose or make obvious what Applicant has claimed in claim 24, nor does Brotz in view of Nobile disclose or make obvious what Applicant has additionally claimed in claim 24 "A machine-readable medium having stored thereon information representing the apparatus of claim 16." Applicant respectfully requests allowance of claim 24.

Claims 17, 20, 21 and 22 Rejection under 35 U.S.C. § 103(a) – Brotz in view of Nobile further in view of Bentley

The Office at 44 states:

44. Claims 17, 20, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brotz '740 in view of Nobile '827 as applied to claim 16 above, and further in view of Bentley '173.

Claim 17 Rejection under 35 U.S.C. § 103(a) – Brotz in view of Nobile further in view of Bentley

The Office at 45-47 states:

45. With regard to claim 17, Brotz '740 in view of Nobile '827 clearly discloses the apparatus of claim 16. However, Brotz '740 in view of Nobile '827 does not disclose a means for compensating for wear associated with said LEDs.

46. In the same field of endeavor, Bentley '173 teaches **a means for compensating for wear associated with said LEDs** (see column 9, lines 34-60, power method used to turn device on during time of use).

47. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have been motivated to incorporate the wear compensation device as taught by Bentley '173 into the display device of Brotz '740 in view of Nobile '827 because all are within the same field of endeavor and furthermore conserving power consumption is a progressive goal in the art.

(Emphases in original.)

The cited reference states in part:

a means for compensating for wear associated with said LEDs (see column 9, lines 34-60, power method used to turn device on during time of use) - BENTLEY

When Motion 66 is detected, the microcontroller wakes up, enters the Test Kinetic Shake 58 state, and waits for a predetermined number of inertia reversals occurring at a predetermined rate. In the preferred embodiment of the invention, this predetermined number of inertia reversals is three reversals in two seconds. If this rate and count of reversals is not detected, it is considered an Incorrect Shake Speed 68 condition and the Sleep 56 state is reentered. This shake speed check is critical since it prevents unintended functioning of the invention. If the Correct Shake Speed 70 is detected, the microprocessor enters the Run 60 state. During this state the visual display is performed and the microprocessor watches for the periodic inertial reversals which are caused by swinging the device back and forth. If the periodic inertial reversals stop, the microprocessor considers this a No Motion 64 detection and it enters the Shutdown Warning 62 state. In the

Shutdown Warning 62 state, an indication is made to the user, by turning on one of the light emitting elements of the lighted array. This indicates that the device is about to turn off. If after a suitable delay, No Motion 64 is detected, the microprocessor turns off the device and enters the Sleep 56 state. If Motion 66 was detected while in the Shutdown Warning 62 state, the microcontroller returns to the Run 60 state and continues to generate the display. This return to the Run 60 state from the Shutdown Warning 62 state can also be used to reset what is displayed to an initial starting display.

Applicant's claim 17 recites:

17. The apparatus of claim 16 further comprising means for compensating for wear associated with said LEDs.

First, Applicant submits that claim 17 is dependent on independent claim 16 and as such inherits the limitations of the independent claim. As detailed above in the Claim 16 Rejection under 35 U.S.C. § 103(a) – Brotz in view of Nobile discussion, Brotz in view of Nobile fails to disclose or make obvious what Applicant has claimed in claim 16, nor does the further in view of Bentley cure these defects. Brotz in view of Nobile further in view of Bentley does not disclose or make obvious what Applicant has additionally claimed in claim 17 "further comprising means for compensating for wear associated with said LEDs." Applicant respectfully requests allowance of claim 17.

Second, **nothing** in the cited section of Bentley refers to compensating for LED wear. The Office's cryptic "power method used to turn device on during time of use" does not disclose compensation for wear. Brotz in view of Nobile further in view of Bentley does not disclose or make obvious what Applicant has additionally claimed. Applicant respectfully requests allowance of claim 17.

Claim 20 Rejection under 35 U.S.C. § 103(a) – Brotz in view of Nobile further in view of Bentley

The Office at 48 states:

48. With regard to claim 20, Brotz '740 in view of Nobile '827 and further in view of Bentley '173 clearly discloses **the apparatus of claim 16 further comprising means for producing an MxN display using M LEDs in said array of LEDs and N positions** (see Bentley '173, column 12, lines 6-26).

(Emphasis in original.)

Applicant submits that claim 20 is dependent on independent claim 16 and as such inherits the limitations of the independent claim. As detailed above in the **Claim 16 Rejection under 35 U.S.C. § 103(a) – Brotz in view of Nobile** discussion, Brotz in view of Nobile fails to disclose or make obvious what Applicant has claimed in claim 16, nor does the further in view of Bentley cure these defects. **Brotz in view of Nobile further in view of Bentley** does not disclose or make obvious what Applicant has additionally claimed in claim 20 "The apparatus of claim 16 further comprising means for producing an MxN display using M LEDs in said array of LEDs and N positions." Applicant respectfully requests allowance of claim 20.

Claim 21 Rejection under 35 U.S.C. § 103(a) – Brotz in view of Nobile further in view of Bentley further in view of Examiner's Personal Knowledge

The Office at 49-50 states:

49. With regard to claim 21, Brotz '740 in view of Nobile '827 and further in view of Bentley '173 clearly teaches the **apparatus of claim 16**. However Brotz '740 in view of Nobile '827 and further in view of

Bentley '173 does not teach **means for producing an MxN display using M/2 LEDs in said array of LEDs and N positions.** (as discussed above, Bentley '173 teaches **a means for producing an MxN display using M LEDs in said array of LEDs and N positions** (see Bentley column 12 lines 6-26)).

50. It therefore would have been an obvious matter of design choice to modify using M LEDs to **using M/2 LEDs in said array of LEDs** because applicant has not disclosed that using fewer LEDs serves or solves any stated problem or is for any other particular purpose other than appearance and the device may perform equally well with less or more LEDs.

(Emphases in original.)

Firstly, Applicant submits that claim 21 is dependent on independent claim 16 and as such inherits the limitations of the independent claim. As detailed above in the **Claim 16 Rejection under 35 U.S.C. § 103(a) – Brotz in view of Nobile** discussion, Brotz in view of Nobile fails to disclose or make obvious what Applicant has claimed in claim 16, nor does the further in view of Bentley cure these defects. **Brotz in view of Nobile further in view of Bentley** does not disclose or make obvious what Applicant has additionally claimed in claim 21. Nor does further **in view of Examiner's Personal Knowledge** cure these defects. **Brotz in view of Nobile further in view of Examiner's Personal Knowledge** does not disclose or make obvious what Applicant has additionally claimed in claim 21 "The apparatus of claim 16 further comprising means for producing an MxN display using M/2 LEDs in said array of LEDs and N positions." Applicant respectfully requests allowance of claim 21.

Secondly, Applicant takes exception to the Examiner's statement of "It therefore would have been an obvious matter of design choice to modify using M LEDs to **using M/2 LEDs in said array of LEDs** because applicant has not disclosed that using fewer LEDs serves or solves any stated problem or is for any other particular purpose other than appearance and the device may perform equally well with less or more LEDs."

First, Applicant is unaware that claims must serve or solve a purpose. Applicant requests the Examiner provide a legal basis for this statement.

Second, Applicant is unaware how the Examiner knows "purpose other than appearance". Applicant therefore requests the Examiner comply with the provisions of 37 CFR § 1.104(d)(2) and supply Applicant with an affidavit.

With respect to the Examiner's personal knowledge statement of "...is for any other particular purpose other than appearance..." (Emphasis added), Applicant hereby requests, as allowed under the Rules, an Affidavit by this Examiner of such personal knowledge. The Examiner is compelled to comply fully with the provisions of 37 CFR § 1.104(d)(2). Please note that failure by the Examiner to respond in a legally sufficient manner within the next Office Action will be deemed an admission against the Office.

Third, 'Applicant is not aware of the truth of this statement "...the device may perform **equally well** with less or more LEDs" (Emphasis added). Applicant

therefore requests the Examiner comply with the provisions of 37 CFR § 1.104(d)(2) and supply Applicant with an affidavit.

With respect to the Examiner's personal knowledge statement of "...the device may perform equally well with less or more LEDs." (Emphasis added), Applicant hereby requests, as allowed under the Rules, an Affidavit by this Examiner of such personal knowledge. The Examiner is compelled to comply fully with the provisions of 37 CFR § 1.104(d)(2). Please note that failure by the Examiner to respond in a legally sufficient manner within the next Office Action will be deemed an admission against the Office.

Fourth. Applicant takes exception to the self-serving statement of the Examiner "obvious matter of design choice to modify using M LEDS to using M/2 LEDs in said array of LEDs." Applicant therefore requests the Examiner comply with the provisions of 37 CFR § 1.104(d)(2) and supply Applicant with an affidavit.

With respect to the Examiner's personal knowledge statement of "...obvious matter of design choice to modify using M LEDS to using M/2 LEDs in said array of LEDs", Applicant hereby requests, as allowed under the Rules, an Affidavit by this Examiner of such personal knowledge. The Examiner is to comply fully with the provisions of 37 CFR § 1.104(d)(2). Please note that failure by the Examiner to respond in a legally sufficient manner within the next Office Action will be deemed an admission against the Office.

Fifth, Applicant requests an Affidavit from the Examiner relating to his personal knowledge of how to use M/2 LEDs to produce a MxN display.

With respect to the Examiner's personal knowledge statement of "...using M/2 LEDs in said array of LEDs" to produce an MxN display, Applicant hereby requests, as allowed under the Rules, an Affidavit by this Examiner of such personal knowledge. The Examiner is to comply fully with the provisions of 37 CFR § 1.104(d)(2). Please note that failure by the Examiner to respond in a legally sufficient manner within the next Office Action will be deemed an admission against the Office.

Claim 22 Rejection under 35 U.S.C. § 103(a) – Brotz in view of Nobile further in view of Bentley further in view of Examiner's Personal Knowledge

The Office at 51 states:

51. With regard to claim 22, it is similarly analyzed as claim 21 above and is rejected under the same rationale.

Applicant's claim 22 recites:

22. The apparatus of claim 16 further comprising means for producing an MxN display using M/J LEDs in said array of LEDs and N positions where J is an integer greater than zero.

Firstly, Applicant submits that claim 22 is dependent on independent claim 16 and as such inherits the limitations of the independent claim. As detailed above in the Claim 16 Rejection under 35 U.S.C. § 103(a) – Brotz in view of Nobile discussion, Brotz in view of Nobile fails to disclose or make obvious what Applicant has claimed in claim 16, nor does the further in view of Bentley cure these defects. Brotz in view of Nobile further in view of Bentley does not disclose or make obvious what Applicant has additionally claimed in claim 2. Nor does further in view of Examiner's Personal Knowledge cure these defects. Brotz in view of Nobile further in view of Bentley further in view of Examiner's Personal Knowledge does not disclose or make obvious what Applicant has additionally claimed in claim 22 "The apparatus of claim 16 further comprising means for producing an $M \times N$ display using M/J LEDs in said array of LEDs and N positions where J is an integer greater than zero." Applicant respectfully requests allowance of claim 22.

Secondly, **Applicant takes exception to the Examiner's statement** of "It therefore would have been an obvious matter of design choice to modify using M LEDs to **using M/J LEDs in said array of LEDs** because applicant has not disclosed that using fewer LEDs serves or solves any stated problem or is for any other particular purpose other than appearance and the device may perform equally well with less or more LEDs."

First, Applicant is unaware that claims must serve or solve a purpose. Applicant requests the Examiner provide a legal basis for this statement.

Second, Applicant is unaware how the Examiner knows "purpose other than appearance". Applicant therefore requests the Examiner comply with the provisions of 37 CFR § 1.104(d)(2) and supply Applicant with an affidavit.

With respect to the Examiner's personal knowledge statement of "...is for any other particular purpose other than appearance..." (Emphasis added), **Applicant hereby requests, as allowed under the Rules, an Affidavit by this Examiner of such personal knowledge. The Examiner is compelled to comply fully with the provisions of 37 CFR § 1.104(d)(2). Please note that failure by the Examiner to respond in a legally sufficient manner within the next Office Action will be deemed an admission against the Office.**

Third, 'Applicant is not aware of the truth of this statement "...the device may perform equally well with less or more LEDs" (Emphasis added). Applicant therefore requests the Examiner comply with the provisions of 37 CFR § 1.104(d)(2) and supply Applicant with an affidavit.

With respect to the Examiner's personal knowledge statement of "...the device may perform equally well with less or more LEDs." (Emphasis added), **Applicant hereby requests, as allowed under the Rules, an Affidavit by this Examiner of such personal knowledge. The Examiner is compelled to comply fully with the provisions of 37 CFR § 1.104(d)(2). Please note that failure by the Examiner to respond in a legally sufficient manner within the next Office Action will be deemed an admission against the Office.**

Fourth, Applicant takes exception to the self-serving statement of the Examiner "obvious matter of design choice to modify using M LEDS to using M/J

LEDs in said array of LEDs.” Applicant therefore requests the Examiner comply with the provisions of 37 CFR § 1.104(d)(2) and supply Applicant with an affidavit.

With respect to the Examiner’s personal knowledge statement of “...obvious matter of design choice to modify using M LEDs to using M/J LEDs in said array of LEDs”, Applicant hereby requests, as allowed under the Rules, an Affidavit by this Examiner of such personal knowledge. The Examiner is to comply fully with the provisions of 37 CFR § 1.104(d)(2). Please note that failure by the Examiner to respond in a legally sufficient manner within the next Office Action will be deemed an admission against the Office.

Fifth, Applicant requests an Affidavit from the Examiner relating to his personal knowledge of how to use M/2 LEDs to produce a MxN display.

With respect to the Examiner’s personal knowledge statement of “...using M/J LEDs in said array of LEDs” to produce an MxN display, Applicant hereby requests, as allowed under the Rules, an Affidavit by this Examiner of such personal knowledge. The Examiner is to comply fully with the provisions of 37 CFR § 1.104(d)(2). Please note that failure by the Examiner to respond in a legally sufficient manner within the next Office Action will be deemed an admission against the Office.

Claim 23 Rejection under 35 U.S.C. § 103(a) – Brotz in view of Nobile further in view of Bentley further in view of Bell

The Office at 52-55 states:

52. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brotz '740 in view of Nobile '827 and further in view of Bentley '173 as applied to claim 20 above, and further in view of Bell, United States Patent Number 4,470,044 (hereinafter referred to as Bell '044.

53. With regard to claim 23, Brotz '740 in view of Nobile '827 and further in view of Bentley '173 clearly discloses **the apparatus of claim 20**. However, Brotz '740 in view of Nobile '827 and further in view of Bentley '173 does not teach **creating said MxN display substantially 24 to 170 times per second**.

54. In the same field of endeavor, Bell '044 teaches creating an MxN display substantially 24-170 times per second (see Bell '044, column 5, lines 57-65).

55. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have been motivated to incorporate they system as taught by Bell '44 into the display system of Brotz '740 in view of Nobile '827 and further in view of Bentley '173 because all references are within the same field of endeavor and furthermore, saccadic movement of the eye allows better perception of the image at certain image production frequencies (see Bell '044, column 2, lines 8-32) thereby improving image quality, which is a progressively common goal in the art.

(Emphases in original.)

The cited reference states in part:

column 5, lines 57-65 - BELL

The LED's are continuously cycled through the 256 image segments every 25.6 milliseconds, or about 39 times per second. With saccadic eye motions of 5 radians per second, the eye moves through an arc of 128 milliradians in 25.6 milliseconds, which will be the angular extent of the perceived image should all memory cells be loaded with data. However, in practice it has been found less ambiguous if a conspicuous blank area is provided between repetitive cycles, so that the observer clearly perceives the start and finish of the image.

column 2, lines 8-32 - BELL

During saccadic movement, stationary objects in the field of view are not clearly perceived, but an image of the previous scene fixed upon persists for up to about 1/4second, with diminishing intensity. The previous image is immediately supplanted by a new image as the eye rests on the next point of fixation, typically within 1/15 to 1/25 second. This action, which may be easily demonstrated using a device as described in the present invention, takes place so rapidly that one is aware only of a smooth continuum of vision, free from blur caused by movement.

Another characteristic of human vision is the span of information perception of recognition, which is partly a function of the visual acuity of the central field of the eye and partly a function of the brain. By presenting images to a human observer for brief durations of 1/1000 to 1 second using a tachistoscope, an instrument well known in the field of vision research, other researchers have shown that for example a whole word or group of words can be accurately perceived even at the shortest of exposures provided that the images were sufficiently near the eye's central field of view, the macular or foveal region, and the eyes were focused and fixated.

Applicant's claim 23 recites:

23. The apparatus of claim 20 further comprising creating said MxN display substantially 24 to 170 times per second.

Applicant submits that claim 23 is dependent on claim 20 which is dependent on independent claim 16 and as such inherits the limitations of the intervening claims. As detailed above in the Claim 16 Rejection under 35 U.S.C. § 103(a) – Brotz in view of Nobile discussion, Brotz in view of Nobile fails to disclose or make obvious what Applicant has claimed in claim 16, nor does the further in view of Bentley further in view of Bell cure these defects. Brotz in view of Nobile further in view of Bentley further in view of Bell does not disclose or make obvious what Applicant has additionally claimed in claim 23 "The apparatus of claim 20 further comprising creating said MxN display substantially 24 to 170 times per second." Applicant respectfully requests allowance of claim 23.

Additionally, **durations (Bell) are not the same as creating said MxN display** substantially 24 to 170 times per second. Applicant respectfully requests allowance of claim 23.

Claim 25 Rejection under 35 U.S.C. § 103(a) – Wang in view of Brotz

The Office at 56-60 states:

56. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang, United States Patent Number 6,348,905 B I and further in view of Brotz '740.

57. With regard to claim 25, Wang '905 discloses **an apparatus comprising a first linear movement stage** (see column 2, lines 8-18, inner frame member 2 in combination with LED display module 3) **mounted on one or more rails** (see column 2 lines 61-62, upper and lower frame parts 10, 11) **oriented in a first direction** (see column 2, lines 8-18, along a longitudinal axis); **a platform mounted to said first linear**

movement stage (see column 2 lines 30-55, the combination of the biasing means 5, the module moving means 6, and the LED display module 3); **a second linear movement stage** (see column 2, lines 18-30, the LED display module 3) **mounted on one or more rails** (see column 2, lines 65-end and continued at column 3, lines 1-7, second supporting means 4', and rails 10, 11) **a substrate** (see column 1, lines 65-end and continued at column 2, lines 1-8, LED display module 3) **mounted to said second linear movement stage** (see FIG 1, and additionally column 2, lines 18-29, display module is mounted by support means 4, and rails 20 and 21); and **an array of light emitting devices (LEDs) attached to said substrate** (see column 1, lines 65-67 and continued at column 2, lines 1-7).

58. However, Wang '905 fails to teach **the second linear movement stage is oriented in a second direction attached to said platform**:

59. Brotz '740 teaches **the second linear movement stage is oriented in a second direction attached to said platform** (see FIG. 1, further described in column 2, lines 36-67).

60. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have been motivated to incorporate the linear movement platform taught by Brotz '740 into the display apparatus of Wang '905 because both are within the same field of endeavor, and because it would create and improve depth of the image produced (see Brotz '740 column 1, lines 55-67).

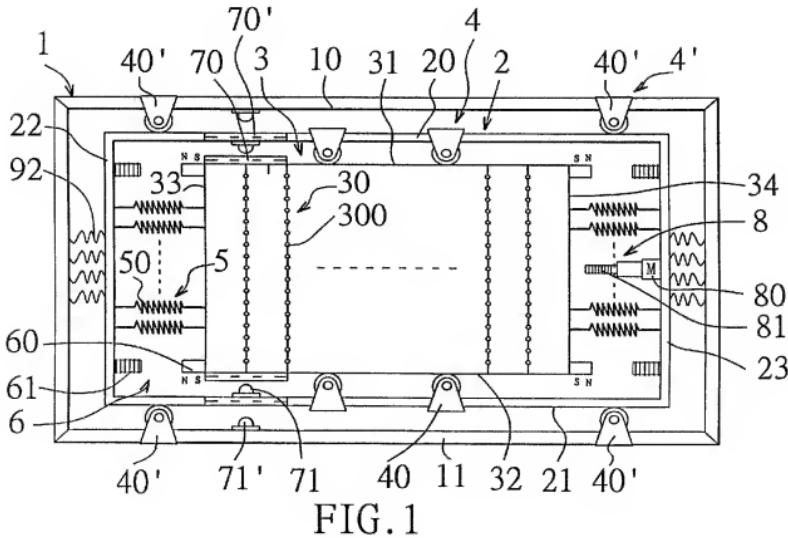
(Emphases in original.)

The cited references state in part:

column 2, lines 8-18 - **WANG**

The inner frame member 2 is disposed to confine the LED display module 3 therein, and has a size sufficient to permit movement of the LED display module 3 in opposite directions of the longitudinal axis. The inner frame member 2 has upper and lower frame parts 20, 21 that extend parallel to and that are disposed adjacent to the upper and lower edges 31, 32 of the LED display module 3, respectively, and left and right frame parts 22, 23 that extend parallel to and that are disposed adjacent to the left and right edges 33, 34 of the LED display module 3, respectively.

FIG 1 - WANG



column 2, lines 18-30 - **WANG**

The first supporting means 4 mounts the LED display module 3 in the inner frame member 2 such that the LED display module 3 is movable back and forth in the inner frame member 2 along the longitudinal axis and such that the LED display module 3 is incapable of moving in directions that are transverse to the longitudinal axis. The first supporting means 4 includes a plurality of roller units 40 mounted on the upper and lower frame parts 20, 21 and in rolling contact with an adjacent one of the upper and lower edges 31, 32 of the LED display module 3. Alternatively, the first supporting means 4 can be implemented using magnetic levitation techniques.

column 2 lines 30-55 - **WANG**

The biasing means 5, which is disposed between the inner frame member 2 and the LED display module 3, provides a biasing force to the LED display module 3 in the opposite directions of the longitudinal axis. The biasing means 5 includes a plurality of coiled springs 50 disposed between a respective one of the left and right frame parts 22, 23 of the inner frame member 2 and an adjacent one of the left and right edges 33, 34 of the LED display module 3. Alternatively, the biasing means 5 can be implemented with the use of magnets.

The module moving means 6, which is disposed between the inner frame member 2 and the LED display module 3, moves the LED display module 3 in opposite directions of the longitudinal axis against biasing action of the biasing means 5. The module moving means 6 includes a plurality of permanent magnets 60 mounted on the left and right edges 33, 34 of the LED display module 3, a plurality of electromagnets 61 mounted on the left and right frame parts 22, 23 of the inner frame member 2, and a magnet control circuit 62 connected electrically to the electromagnets 61 and operable so as to control the electromagnets 61 to attract with and to repel from the permanent magnets 60, such as by controlling magnitude and direction of current to the electromagnets 61,

thereby moving the LED display module 3 in the opposite directions of the longitudinal axis against the biasing action of the biasing means 5.

column 2 lines 61-62 - **WANG**

The outer frame member 1 has upper and lower frame parts 10, 11 that extend parallel to and that are disposed adjacent to the upper and lower frame parts 20, 21 of the inner frame member 2, respectively.

column 2, lines 65-end and continued at column 3, lines 1-7 -

WANG

The second supporting means 4' mounts the inner frame member 2 in the outer frame member 1 such that the inner frame member 2 is movable back and forth in the longitudinal axis and such that the inner frame member 2 is incapable of moving in directions that are transverse to the longitudinal axis. The second supporting means 4' includes a plurality of roller units 40' mounted on the upper and lower frame parts 10, 11 of the outer frame member 1 and in rolling contact with an adjacent one of the upper and lower frame parts 20, 21 of the inner frame member 2

column 1, lines 65-end and continued at column 2, lines 1-8 -

WANG

The LED display module 3 has an array of LEDs 300 mounted thereon, and a longitudinal axis. The array of LEDs 300 consists of a plurality of parallel strips 30 of LEDs 300. The strips 30 of

LEDs 300 are arranged spacedly along the longitudinal axis at equal intervals. Each of the strips of LEDs 300 includes a plurality of sets of red, green and blue LEDs 300. The LED display module 3 has upper and lower edges 31, 32 that extend parallel to the longitudinal axis, and left and right edges 33, 34 that are transverse to the longitudinal axis.

FIG. 1 - BROTZ

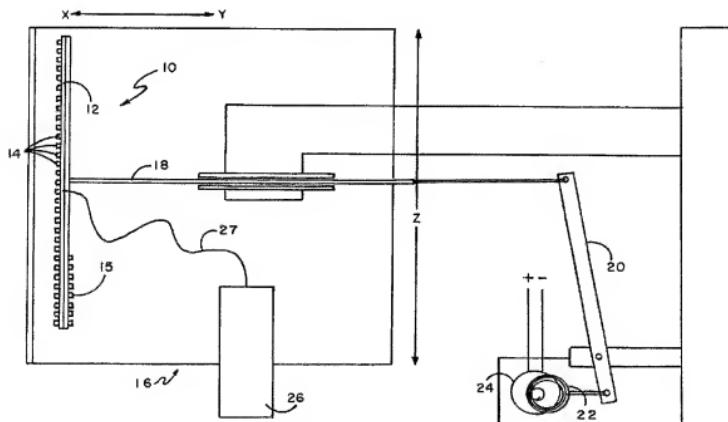


FIG. I

see column 2, lines 36-67 - BROTZ

Three-dimensional display devices incorporating rotating flat screens are found in the art, being described in the Schwertz U.S. Pat. No. 3,154,636 and in the Berlin U.S. Pat. No. 4,160,973 which devices utilize a planar screen which rotates around an axis being attached to an edge of the screen. These devices use LEDs or discrete electroluminescing areas to make the rotating planar screen generate a two-dimensional image that changes according to its position during rotation. A

drawback to such devices is that from any vantage point a dark line forms down the center of the image produced due to the thickness of the screen at a point during its rotation when it is directly facing the viewer. Also, complex electronics are required to compensate for the virtual narrowing and widening of the screen and the related change in perspective as the screen sweeps from its position when its edge is facing the viewer to a position 90 degrees therefrom when the surface of the screen plane is facing the viewer.

SUMMARY OF THE INVENTION

The device of this invention utilizes a screen disposed in a viewing chamber which screen moves in such viewing chamber so that portions of the screen at points in time occupy every point of the display volume of the viewing chamber. When display information is provided to the screen for areas of the screen to be illuminated, the movement of the screen through space produces the impression to an observer that the image has depth or a three-dimensional quality. This effect in one embodiment of the device of this invention is accomplished by moving a flat screen linearly oscillating back and forth in the chamber with the screen having image-producing means thereon which in one embodiment can be a plurality of light-emitting elements on the front surface thereon, each independently activated as directed by a video program to produce an image.

column 1, lines 55-67 - **BROTZ**

SUMMARY OF THE INVENTION

The device of this invention utilizes a screen disposed in a viewing chamber which screen moves in such viewing chamber so that portions of the screen at points in time occupy every point of

the display volume of the viewing chamber. When display information is provided to the screen for areas of the screen to be illuminated, the movement of the screen through space produces the impression to an observer that the image has depth or a three-dimensional quality. This effect in one embodiment of the device of this invention is accomplished by moving a flat screen linearly oscillating back and forth in the chamber with the screen having image-producing means thereon which in one embodiment can be a plurality of light-emitting elements on the front surface thereon, each independently activated as directed by a video program to produce an image.

Applicant's claim 25 recites:

25. An apparatus comprising:

- a first linear movement stage mounted on one or more rails oriented in a first direction;
- a platform mounted to said first linear movement stage;
- a second linear movement stage mounted on one or more rails oriented in a second direction attached to said platform;
- a substrate mounted to said second linear movement stage; and
- an array of light emitting devices (LEDs) attached to said substrate.

Firstly, Applicant submits that combining Wang with Brotz would destroy the functionality of Brotz. Thus there is no motivation to combine. Wang is a single linear movement and mounting Wand on Brotz would destroy the ability of Brotz (14) to display anything.

Second, trying to attach the first stage of Wang as noted by the Examiner as "inner frame member 2 in combination with LED display module 3" with Brotz would destroy the functionality of Wang as the first stage will no longer be able to move. Thus there is no motivation to combine.

Third, the Office's reasoning is flawed as the Office attempts to use the same "rails" in Wang for both the first linear stage and the second linear stage thus making impossible them being oriented at a second direction. Quoting: 1) **a first linear movement stage mounted on one or more rails ...upper and lower frame parts 10, 11) oriented in a first direction ... 2) a second linear movement stage mounted on one or more rails ... rails 10, 11).** Thus Wang fails to disclose what Applicant has claimed. Nor does the addition of Brotz cure these defects.

For all the above reasons neither Wang nor Brotz nor Wang in view of Brotz disclose or make obvious what Applicant has claimed in claim 25. Applicant respectfully requests allowance of claim 25.

Claim 26 Rejection under 35 U.S.C. § 103(a) – Wang in view of Brotz

The Office at 61 states:

61. With regard to claim 26, Wang '905 in view of Brotz '740 discloses **the apparatus of claim 25 wherein said first direction and said second direction are substantially at a right angle.** (Wang '905 direction is side to side, see FIG. 1; Brotz '740 direction is in and out, see FIG. 1 which is at a 90 degree angle to the side to side).

(Emphasis in original.)

Applicant submits that claim 26 is dependent on independent claim 25 and as such inherits the limitations of the independent claim. As detailed above in the Claim 25 Rejection under 35 U.S.C. § 103(a) – Wang in view of Brotz discussion, for the various reasons Wang in view of Brotz fails to disclose or make obvious what Applicant has claimed in claim 25. Nor does Wang in view of Brotz disclose or make obvious what Applicant has additionally claimed in claim 26 “The apparatus of claim 25 wherein said first direction and said second direction are substantially at a right angle.” Applicant respectfully requests allowance of claim 26.

Claim 27 Rejection under 35 U.S.C. § 103(a) – Wang in view of Brotz

The Office at 62 states:

62. With regard to claim 27, Wang '905 in view of Brotz '740 discloses the apparatus of claim 25 further comprising: a first moving means attached to said first linear movement stage (see Wang '905 FIG. 1, elements 6 and further described in column 2, lines 41-48); and a second moving means attached to said second linear movement stage (see Brotz '740, FIG. 6 element 82, further described in Brotz '740 column 4, lines 54-67).

(Emphases in original.)

Applicant submits that claim 27 is dependent on independent claim 25 and as such inherits the limitations of the independent claim. As detailed above in the Claim 25 Rejection under 35 U.S.C. § 103(a) – Wang in view of Brotz discussion, for the various reasons Wang in view of Brotz fails to disclose or make obvious what Applicant has claimed in claim 25. Nor does Wang in view of Brotz disclose or make obvious what

Applicant has additionally claimed in claim 27 "The apparatus of claim 25 further comprising: a first moving means attached to said first linear movement stage; and a second moving means attached to said second linear movement stage." Applicant respectfully requests allowance of claim 27.

Claim 28 Rejection under 35 U.S.C. § 103(a) – Wang in view of Brotz

The Office at 63 states:

63. With regard to claim 28, Wang '905 in view of Brotz '740 discloses, **the apparatus of claim 27 wherein said second moving means is mounted on said platform** (see Brotz, FIG. FIG. 6 wherein shaft 72 mounts onto the screen 64).

(Emphasis in original.)

Applicant submits that claim 28 is dependent on claim 27 which is dependent on independent claim 25 and as such inherits the limitations of the intervening claims. As detailed above in the **Claim 25 Rejection under 35 U.S.C. § 103(a) – Wang in view of Brotz** discussion, for the various reasons Wang in view of Brotz fails to disclose or make obvious what Applicant has claimed in claim 25. Nor does Wang in view of Brotz disclose or make obvious what Applicant has additionally claimed in claim 27 "The apparatus of claim 25 further comprising: a first moving means attached to said first linear movement stage; and a second moving means attached to said second linear movement stage." Nor does Wang in view of Brotz disclose or make obvious what Applicant has additionally claimed in claim 28 "The apparatus of claim 27 wherein said second moving means is

mounted on said platform." Applicant respectfully requests allowance of claim 28.

Claim 29 Rejection under 35 U.S.C. § 103(a) – Wang in view of Brotz

The Office at 64 states:

64. With regard to claim 29, Wang '905 in view of Brotz '740 discloses **the apparatus of claim 25 further comprising one or more lenses in optical communication with said array of LEDs** (see Brotz '740, FIG. 6, element 62, is a transparent side of chamber 60; further described at column 5, lines 1-7).

(Emphasis in original.)

The cited references state in part:

FIG. 6 – BROTZ

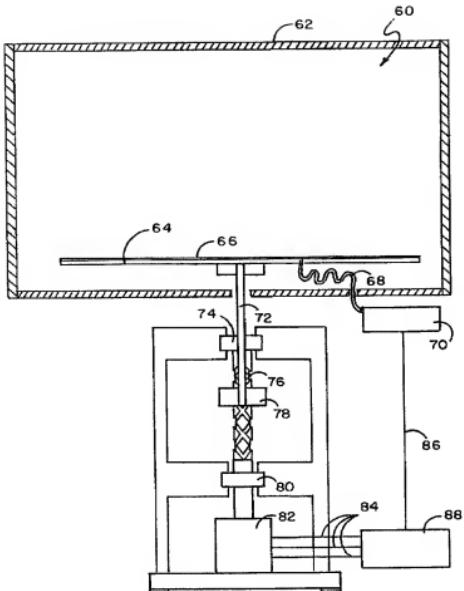


FIG. 6

column 5, lines 1-7 - BROTZ

Stepper motor controller then controls stepper motor 82 to rotate to position screen 64 at the desired level within chamber 60 such that screen 64 can be viewed through **transparent side** 62. Because of the relatively constant velocity of the self-reversing screw producing the oscillating motion of the screen, there is less deceleration and acceleration before and after the reversal of direction of screen 64 within chamber 60.

(Emphasis added.)

Applicant's claim 29 recites:

29. The apparatus of claim 25 further comprising one or more lenses in optical communication with said array of LEDs.

Applicant submits that a transparent side (Brotz) is not the same as lenses which Applicant has claimed. One of skill in the art understands that a lens is a transparent substance, such as glass, having two opposite surfaces either both curved or one curved and one plane. Lenses are used in an optical device to change the convergence of light rays. A transparent side does not change the convergence of light rays. Thus Wang in view of Brotz fails to disclose or make obvious what Applicant has claimed in claim 29

Additionally, Applicant submits that claim 29 is dependent on independent claim 25 and as such inherits the limitations of the independent claim. As detailed above in the Claim 25 Rejection under 35 U.S.C. § 103(a) – Wang in view of Brotz discussion, for the various reasons Wang in view of Brotz fails to disclose or make obvious what Applicant has claimed in claim 25. Nor does Wang in view of Brotz disclose or make obvious what Applicant has additionally claimed in claim 29 "The apparatus of claim 25 further comprising one or more lenses in optical communication with said array of LEDs." Applicant respectfully requests allowance of claim 29.

Claims 31, 32, 33, 34, and 35 Rejection under 35 U.S.C. § 103(a) – McEwen in view of Conemac

The Office at 65 states:

65. Claims 31, 32, 33, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over McEwen et al., United States Patent Number 5,192,864 (hereinafter referred to as "McEwen '864") and further in view of Conemac, United States Patent Number 6,621,609 B1 (hereinafter referred to as "Conemac '609").

Claim 31 Rejection under 35 U.S.C. § 103(a) – McEwen in view of Conemac

The Office at 66-69 states:

66. With regard to claim 31, McEwen '864 teaches **a display apparatus comprising** (see FIG. 3 generally further described at column 2, line 55): **a plurality of movable optical sources** (see FIG. 2a and 2b, element 6 further described at column 3, lines 8-13) **capable of producing an optical output** (see FIG. 3 eyepiece 13, column 4, lines 5-13); **a lens capable of receiving and projecting the optical output** (see column 4, lines 15-20 describing a lens).

67. However, McEwen '864 differs from the claimed invention in that McEwen '864 does not fully teach **a plurality of moveable optical sources**.

68. In the same field of endeavor, Conemac '609 teaches **a plurality of moveable optical sources** (see column 4, lines 6-12, multifaceted polygon reflector 32).

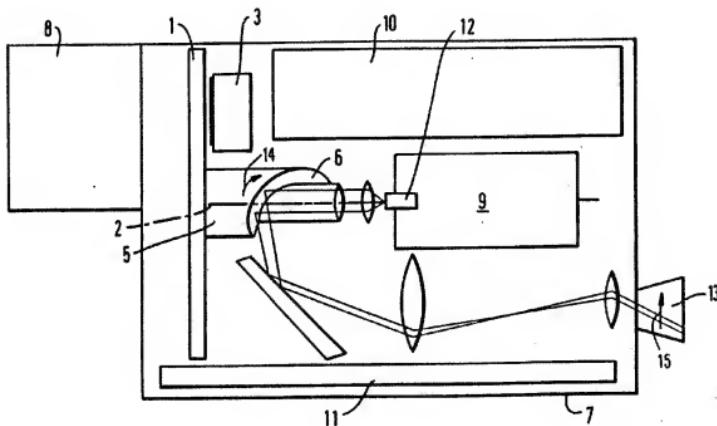
69. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have been motivated to incorporate multifaceted reflector as taught by Conemac '609 into the

of display device of McEwen '864 because both are within the same field of endeavor and furthermore, the additional sides reduced motor usage requirements for rotation and reflection of the image (see Conemac '609 column 2, lines 14-26).
(Emphases in original.)

The cited references state in part:

FIG.3 - MCEWEN

FIG.3



column 2, line 55 - MCEWEN

FIG. 3 is a diagrammatic representation of an imager in accordance with a first embodiment of the invention;

see FIG. 3 eyepiece 13, column 4, lines 5-13 - MCEWEN

The cylinder mirrored surface arrangement 5 and 6 of FIG. 3 has been replaced by an eight sided polygon such that for each 1/8 of a rotation by the chopper 17 an image of the LED array is scanned across the eye piece 13. Each column of the sensor array 3 is read out by the electronic circuit 11 and amplified and transferred to the LED array 12. Successive columns as displayed by the LED array 12 are scanned across the eye piece such that due to persistence of vision an observer appears to see a complete image as seen by the imaging array 3.

FIG. 2A

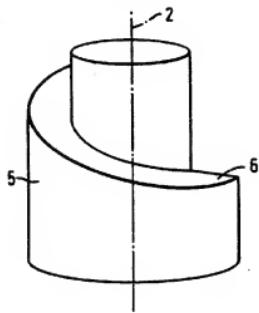
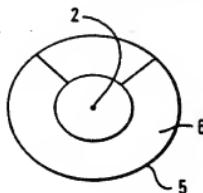


FIG. 2B



column 3, lines 8-13 - MCEWEN

Referring to FIGS. 2a and 2b there is illustrated a cylinder 5 carrying a substantially helical mirrored surface 6 for rotation about an axes 2. This cylinder arrangement is used in conjunction with the chopper depicted in FIG. 1 in the imager 7 of FIG. 3.

a lens capable of receiving and projecting the optical output (see column 4, lines 15-20 describing a lens) - MCEWEN

What we claim is:

1. An imager comprising: a sensor array consisting of a two dimensional array of sensing elements positioned relative to the lens such that the lens focuses on image on the sensor array; a rotatable chopper providing a shuttering function for the array; readout means for the sensor array;

column 4, lines 6-12, multifaceted polygon reflector 32 - **CONEMAC**

As shown in FIG. 2, the laser beam scanning apparatus includes a multifaceted polygon reflector 32. The polygon shaped reflector 32 is preferably coupled to a variable speed motor 36 which provides for high speed rotation of the reflector 32 such that successive flat reflective facets on the circumference thereof are brought into reflective contact with the laser beams.

Applicant's claim 31 recites:

31. A display apparatus comprising:

 a plurality of movable optical sources capable of producing an optical output;
 a lens capable of receiving and projecting the optical output.

Firstly, Applicant submits that the Office has mischaracterized McEwen. Specifically the Office states "**a plurality of movable optical sources** (see FIG. 2a and 2b, element 6 further described at column 3, lines 8-13)." The cited reference states "Referring to FIGS. 2a and 2b there is illustrated a cylinder 5 carrying a substantially **helical mirrored surface 6** for rotation about an axes 2. This cylinder arrangement is used in conjunction with the chopper depicted in FIG. 1 in the imager 7 of FIG. 3."

(Emphasis added.)

A mirrored surface (McEwen) is not the same as an optical source (Applicant).

Thus McEwen fails to disclose this limitation as claimed by Applicant. Nor does the addition of Conemac cure this defect. McEwen in view of Conemac fails to disclose or make obvious what Applicant has claimed in claim 31. Applicant respectfully requests allowance of claim 31 and claims 32-35 which are dependent on claim 31 and which McEwen in view of Conemac fails to disclose or make obvious.

Secondly, the Office asserts "68. In the same field of endeavor, Conemac '609 teaches a **plurality** of moveable optical sources (see column 4, lines 6-12, multifaceted polygon reflector 32)." However at the cited reference it states "As shown in FIG. 2, the laser beam scanning apparatus includes a multifaceted polygon **reflector** 32. The polygon shaped reflector 32 is preferably coupled to a variable speed motor 36 which provides for high speed rotation of the reflector 32 such that successive flat reflective facets on the circumference thereof are brought into reflective contact with the laser beams."

(Emphasis added.)

A reflector (Conemac) is not the same as an optical source (Applicant). Thus Conemac fails to disclose this limitation as claimed by Applicant. Nor does the addition of McEwen cure this defect. McEwen in view of Conemac fails to disclose or make obvious what Applicant has claimed in claim 31. Applicant respectfully requests allowance of claim 31 and claims 32-35 which are dependent on claim 31 and which McEwen in view of Conemac fails to disclose or make obvious.

Thirdly, neither McEwen nor Conemac disclose or suggest “a plurality of movable optical sources” as Applicant has claimed. Nor does the combination of McEwen in view of Conemac disclose such. McEwen in view of Conemac fails to disclose or make obvious what Applicant has claimed in claim 31. Applicant respectfully requests allowance of claim 31 and claims 32-35 which are dependent on claim 31 and which McEwen in view of Conemac fails to disclose or make obvious.

Claim 32 Rejection under 35 U.S.C. § 103(a) – McEwen in view of Conemac

The Office at 70 states:

70. With regard to claim 32, McEwen '864 in view of Conemac '609 teaches **the display apparatus of claim 31 where said lens further comprises a plurality of lenses** (see McEwen at FIG. 3 unmarked lenses between elements 9 and 11).

(Emphasis in original.)

32. The display apparatus of claim 31 where said lens further comprises a plurality of lenses.

Applicant submits that claim 32 is dependent on independent claim 31 and as such inherits the limitations of the independent claim. As detailed above in the **Claim 31 Rejection under 35 U.S.C. § 103(a) – McEwen in view of Conemac** discussion, for the various reasons McEwen in view of Conemac fails to disclose or make obvious what Applicant has claimed in claim 31. Nor does McEwen in view of Conemac disclose or make obvious what Applicant has additionally claimed in claim 32 “The display apparatus of claim 31 where said lens further comprises a plurality of lenses.” Applicant respectfully requests allowance of claim 32.

Claim 33 Rejection under 35 U.S.C. § 103(a) – McEwen in view of Conemac

The Office at 71 states:

71. With regard to claim 33, McEwen '864 in view of Conemac '609 teaches the display apparatus of claim 32 wherein some of said plurality of lenses is a group of microlenses in substantially close physical proximity to and optically coupled to one or more of said plurality of movable optical sources (see McEwen '864, lenses depicted are within close proximity of each other and one lens is between elements 12 and 6).

(Emphasis in original.)

Applicant submits that claim 33 is dependent on claim 32 which is dependent on independent claim 31 and as such inherits the limitations of the intervening claims. As detailed above in the **Claim 31 Rejection under 35 U.S.C. § 103(a) – McEwen in view of Conemac** discussion, for the various reasons McEwen in view of Conemac fails to disclose or make obvious what Applicant has claimed in claim 31 or claim 32. Nor does McEwen in view of Conemac disclose or make obvious what Applicant has additionally claimed in claim 33 "The display apparatus of claim 32 wherein some of said plurality of lenses is a group of microlenses in substantially close physical proximity to and optically coupled to one or more of said plurality of movable optical sources." Applicant respectfully requests allowance of claim 33.

Claim 34 Rejection under 35 U.S.C. § 103(a) – McEwen in view of Conemac

The Office at 72 states:

72. With regard to claim 34, McEwen '864 in view of Conemac '609 teaches **the display apparatus of claim 33 wherein some of said plurality of lenses are lenses associated with a projection lens system** (see McEwen '864 lenses between elements 9 and 11) **for projecting said optical output onto a viewable surface** (see Conemac '609, display screen 206, column 4, lines 28-36).
(Emphases in original.)

Applicant submits that claim 34 is dependent on claim 33 which is dependent on claim 32 which is dependent on independent claim 31 and as such inherits the limitations of the intervening claims. As detailed above in the Claim 31 Rejection under 35 U.S.C. § 103(a) – McEwen in view of Conemac discussion, for the various reasons McEwen in view of Conemac fails to disclose or make obvious what Applicant has claimed in claim 31 or claim 32 or claim 33. Nor does McEwen in view of Conemac disclose or make obvious what Applicant has additionally claimed in claim 34 "The display apparatus of claim 33 wherein some of said plurality of lenses are lenses associated with a projection lens system for projecting said optical output onto a viewable surface." Applicant respectfully requests allowance of claim 34.

Claim 35 Rejection under 35 U.S.C. § 103(a) – McEwen in view of Conemac

The Office at 73 states:

73. With regard to claim 35, McEwen '864 in view of Conemac '609 teaches **the display apparatus of claim 34 wherein said viewable surface is selected from the group consisting of a flat surface** (see Conemac '609 display screen 206, column 4, lines 28-36), **a retinal surface** (see McEwen '864 element 13, column 4, lines 1-10), **and a semi-transparent optical surface** (see Conemac column 1, lines 24-30, rear projection displays).

(Emphases in original.)

Applicant submits that claim 35 is dependent on claim 34 which is dependent on claim 33 which is dependent on claim 32 which is dependent on independent claim 31 and as such inherits the limitations of the intervening claims. As detailed above in the Claim 31 Rejection under 35 U.S.C. § 103(a) – McEwen in view of Conemac discussion, for the various reasons McEwen in view of Conemac fails to disclose or make obvious what Applicant has claimed in claim 31 or claim 32 or claim 33 or claim 34. Nor does McEwen in view of Conemac disclose or make obvious what Applicant has additionally claimed in claim 35 "The display apparatus of claim 34 wherein said viewable surface is selected from the group consisting of a flat surface, a retinal surface, and a semi-transparent optical surface." Applicant respectfully requests allowance of claim 35.

Claim 40 Rejection under 35 U.S.C. § 103(a) – Bentley in view of Nakamats

The Office at 73-77 states:

74. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bentley '173 as applied to claim 37 above, and further in view of NakaMats, United States Patent Number US 6,249,998 B 1 (hereinafter referred to as "NakaMats '998").

75. With regard to claim 40, Bentley '173 **teaches the method of claim 37.** However, Bentley '173 fails to teach **said moving further comprises moving in a substantially nonlinear direction.**

76. In the same field of endeavor, NakaMats '998 teaches **said moving further comprises moving in a substantially non-linear direction** (see FIG. 1a and 1b).

77. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have been motivated to incorporate the non-linear movement as taught by NakaMats '998 into the device of Bentley '173 because both references are within the same field of endeavor and furthermore, a non-linear motion as such would require less effort to create the hand movement (see NakaMats '998 at column 1, lines 55-67).

(Emphases in original.)

The cited reference states in part:

FIG. 1a and 1b - NAKAMATS

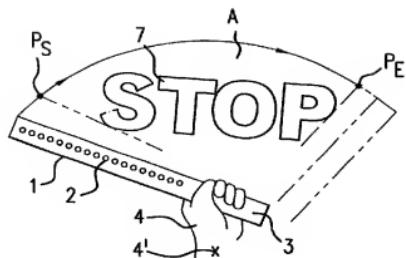


FIG.1a

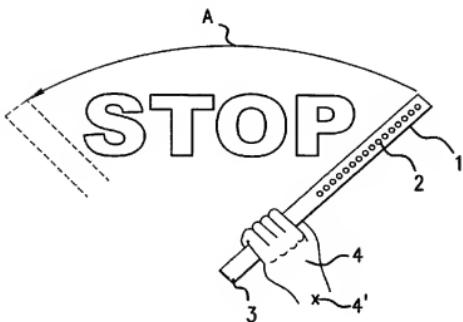


FIG.1b

column 1, lines 55-67 - NAKAMATS

FIGS. 1a and 1b are front and back views of Embodiment 1 of the present invention. A plurality of luminous devices 2, such as Light Emitting Diodes or Vacuum Fluorescent Displays, are mounted on a body which is in the shape of a bar 1. In FIG. 1, the luminous devices 2 are arranged in one line, however, the luminous devices 2 can be arranged in a plurality of lines as well as on both

sides of the bar 1. A handle 3 on the bar 1 is held by a person's hand 4. Electric circuits 5 and 5' control lighting of the plurality of luminous devices 2 and a battery 6 is contained in the handle 3 as shown in FIG. 2. A switch 11 is operable to switch the circuits 5 and 5'.

Applicant's claim 40 recites:

40. The method of claim 37 wherein said moving further comprises moving in a substantially non-linear direction.

Applicant submits that claim 40 is dependent on Applicants as amended independent claim 37 and as such inherits the limitations of the independent claim. As detailed above in the Claim 37 Rejection under 35 U.S.C. § 102(e) - Bentley discussion, Bentley fails to disclose limitations in independent claim 37. Nor does the addition of Nakamats cure these defects. Bentley in view of Nakamats fails to disclose or make obvious what Applicant has claimed in claim 37. Nor does Bentley in view of Nakamats disclose or make obvious what Applicant has additionally claimed in claim 40 "The method of claim 37 wherein said moving further comprises moving in a substantially non-linear direction." Applicant respectfully requests allowance of claim 40.

CONCLUSION

Applicant submits that the rejection of dependent claims not specifically addressed, are addressed by Applicant's arguments to the claim(s) on which they depend.

Applicant respectfully submits that all claims are in condition for allowance and requests such.

Communication via cleartext email is authorized.

Respectfully submitted,

Heimlich Law

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